

## **PRECISION STRIKE ANNUAL REVIEW (PSAR-18)**

**20 MARCH 2018**

**LOCKHEED MARTIN GLOBAL VISION CENTER**

**2121 CRYSTAL DRIVE, ARLINGTON, VA**

PSAR-18 will be conducted at the **SECRET//NOFORN** Classification Level

*This document is unclassified in its entirety*

### ***Strategic and Agile Acquisition Response to the Growing National Security Threat***

PSA Programs Chair: Ginny Sniegon

PSA Programs Vice-Chair: Captain David “Jumbo” Baird, USN

Annual Review Chair: Kurt Chankaya

Congressional & William J. Perry Award Chair: Dick Rumpf

Annual Meeting Chair: Ken Masson

#### **U.S. Military & Civilian Advisors**

Air Force: Colonel Steve “Dallas” Horton, USAF

Army: Lieutenant Colonel Frank Leija, USA & Lieutenant Colonel Ken Britt, USA (Ret)

Navy: Commander Eric “Skip” Taylor, USN & Major Ryan “Puddles” Thompson, USMC

Marine Corps: Major Ryan “Spidey” Welborn, USMC

Joint Staff: Lieutenant Colonel Nathan “VI-DOF” Diller, USAF (J-8) & Major Dan “Otis” Harper, USAF (J-8)

OSD: Captain David “Jumbo” Baird, USN & Chuck “Tooba” Kelly

## **TUESDAY, 20 MARCH**

**0700 REGISTRATION / CONTINENTAL BREAKFAST**

**0745 PSA ANNUAL REVIEW WELCOME:**

**Ken Masson**—PSA Chairman

**0755 PSAR-18 OPENING REMARKS:**

**Kurt Chankaya**—PSAR-18 Event Chair

**0800 CONGRESSIONAL PERSPECTIVE—THE GROWING NATIONAL SECURITY THREAT:**

**Congressman Rob Wittman (VA-01)**—Chairman of the House Armed Services Committee Subcommittee on Seapower and Projection Forces

**0830 NATIONAL SECURITY STRATEGY OF THE UNITED STATES OF AMERICA:**

**Dr. Nadia Schadlow**—Deputy National Security Advisor for Strategy, NSC

**0900 NETWORKING REFRESHMENT BREAK**

- 0915 NATIONAL DEFENSE STRATEGY (NDS)—PRECISION ENGAGEMENT CHALLENGES:**  
**Elbridge Colby (SES)**—Deputy Assistant Secretary of Defense for Strategy and Force Development, Office of the Under Secretary of Defense (Policy)
- 1000 DEVELOPING AGILE JOINT REQUIREMENTS AND CAPABILITIES:**  
**Brigadier General David Krumm, USAF**—Deputy Director for Requirements & Capability Development, Joint Staff Force Structure, Resources and Assessment Directorate (J-8)
- 1030 CONVENTIONAL PROMPT STRIKE TEST RESULTS:**  
**Colonel David Buchanan, USAF**—Deputy Director for Space and Prompt Strike, OUSD for Acquisition and Sustainment (OUSD(A&S))
- 1100 DARPA OPERATIONAL FIRES:**  
**Major Amber Walker, USA, Ph.D.**—Program Manager, Tactical Technology Office, Defense Advanced Research Projects Agency (DARPA)
- 1120 TURNING EXISTING TECHNOLOGIES AND WEAPONS INTO SURPRISING NEW CAPABILITIES—FAST:**  
**Vincent Sabio**—Program Manager, Advanced Technology Programs, Strategic Capabilities Office (SCO), OUSD for Research and Engineering (OUSD(R&E))
- 1200 KEYNOTE ADDRESS—U.S. PACIFIC FLEET POSTURE FOR PRECISION ENGAGEMENT:**  
**Admiral Scott H. Swift, USN**—Commander, U.S. Pacific Fleet (via Video)
- 1230 LUNCHEON & WILLIAM J. PERRY AWARD CEREMONY (Multipurpose Room)**
- **PSA Chairman’s Announcement:** **Ken Masson**
  - **Special Remarks by Dr. Bill Perry:** **Dick Rumpf presents Video**
  - **Presentation of 22<sup>st</sup> William J. Perry Award to Admiral Scott H. Swift, USN**
  - **Reading of Citation:** **Captain Jumbo Baird, USN**
  - **Brief remarks by Admiral Scott “Notso” Swift, USN** (via Video)
  - **Special Luncheon for All Participants**
- 1320 NUCLEAR POSTURE REVIEW (NPR)—PRECISION STRIKE STRATEGIC CHALLENGES:**  
**Gregory J. Weaver (SES)**—Deputy Director, Strategic Stability (DD STS) Strategic Plans and Policy Directorate (J-5), the Joint Staff
- 1400 F-35 JOINT STRIKE FIGHTER PROGRAM UPDATE:**  
**Vice Admiral Mat Winter, USN**—Director, Joint Strike Fighter Program, Office of the Secretary of Defense

- 1445 DEFENSE INDUSTRIAL BASE OPTIMIZATION MODEL CONCEPT:**  
**Dr. Justin Lloyd & Julie Kelly**—Research Staff Members, Strategy, Forces & Resources Division (SFRD), Institute for Defense Analyses (IDA)
- 1505 REFRESHMENT BREAK**
- 1515 SPECIAL TACTICS INNOVATION MODEL:**  
**Major Mike Smith, USAF**—Chief of Weapons & Tactics, 720<sup>th</sup> Special Tactics Group, Air Force Special Operations Command (AFSOC)
- 1545 FUTURE STRIKE TECHNOLOGIES FOR PRECISION ENGAGEMENT:**  
**Lieutenant Colonel Nathan Pierpoint, USAF**—492<sup>nd</sup> Special Operations Wing, Chief of Tactics Development and Innovation, AFSOC
- 1615 MUNITIONS INDUSTRIAL BASE RESILIENCY TO MEET CURRENT NEEDS AND FUTURE COMBAT OPERATIONS:**  
**Eric Chewning (SES)**—Deputy Assistant Secretary of Defense for Manufacturing & Industrial Base Policy, OUSD for Acquisition and Sustainment (OUSD(A&S))
- 1700 EVENING RECEPTION WITH HEAVY HORS D’OEUVRES & INFORMAL ANNUAL MEETING**

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# USAF Special Tactics Innovation Model

Major Michael D. Smith  
720th Special Tactics Group



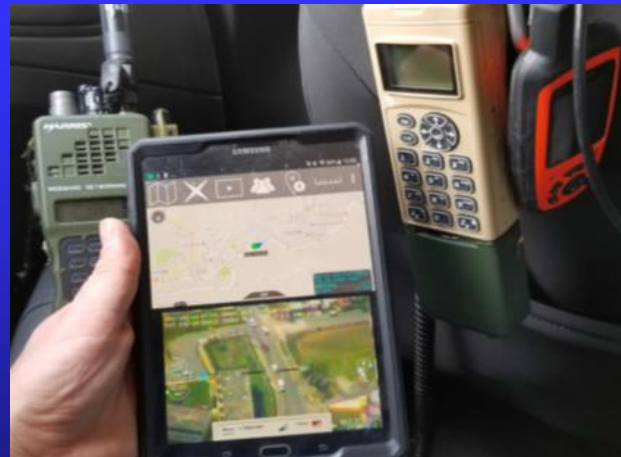
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# OVERVIEW



- Situation
- Analysis
- Approach



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# Special Tactics Missions and ST C2MS

## Situation

### — Global Access

Airfield Seizure / Survey: Launch Follow-on Missions / Off-site Raids

### — Precision Strike

Interdiction / CAS / Kinetic Strike vs HVIs

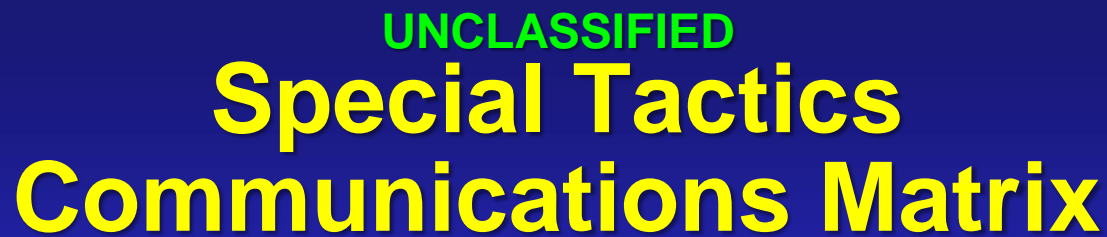
### — Personnel Recovery

CSAR / Battlefield Trauma Support and Austere Surgery

These missions required a new ground-centric systems approach called ST C2MS\*

*\*Special Tactics Command and Control Mission Systems*







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## Special Tactics

### Ground-Centric Datalink Solution



Fig 1: Current Army and Air Force Link 16 System



Fig 2 Current SOF Link 16 System



Fig 3 Hand Held Link 16



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# ST C2MS

## ST C2MS is similar to:

- Aircraft airborne mission networking (AbMN) systems
- Traditional C2 servers and applications
- Electronic flight bags (EFB)

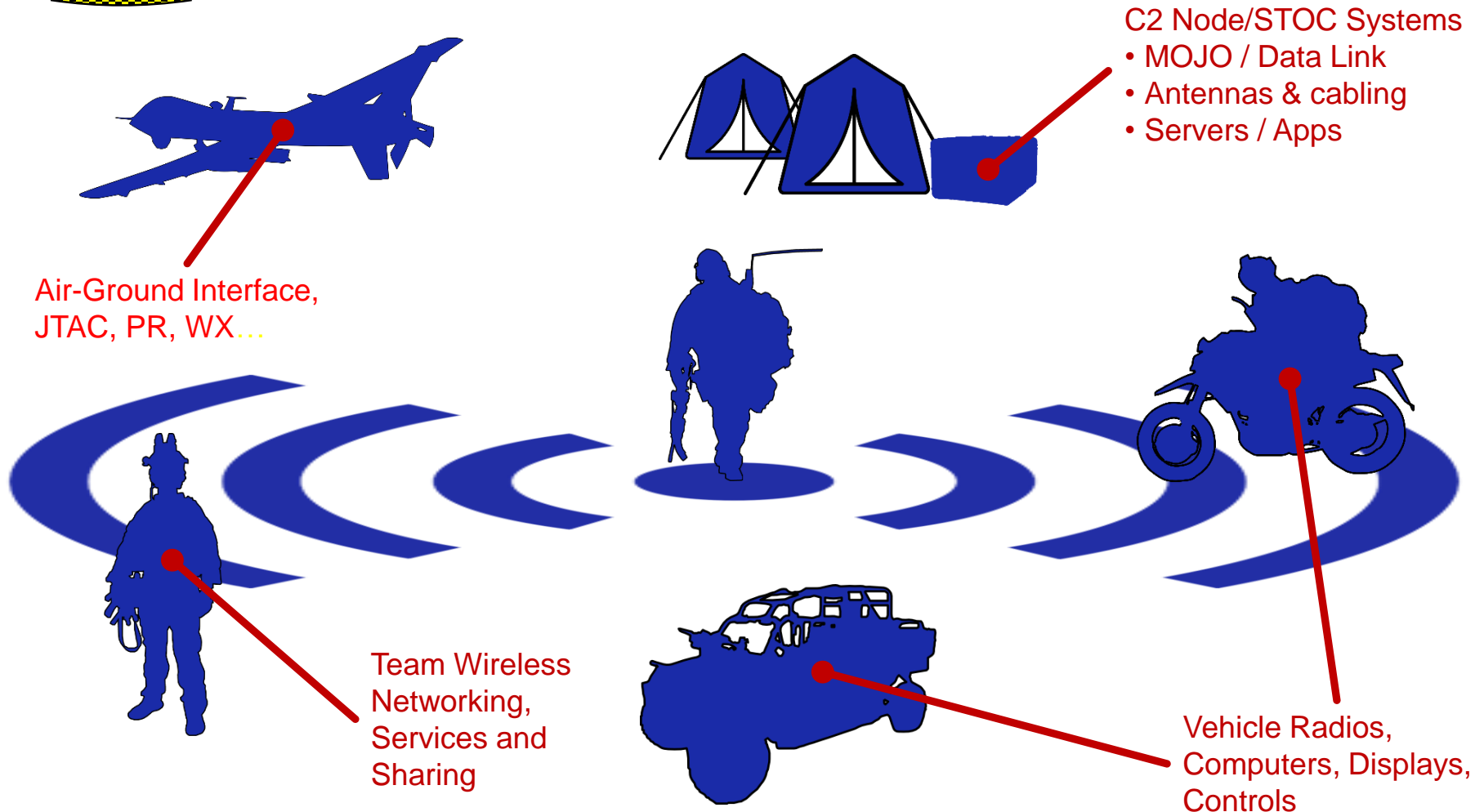
**ST operators are the focus, not aircraft platforms**

## ST C2MS connects and networks:

- Other ST and SOF operators
- Vehicles
- C2 nodes
- Air and ground weapon systems



# ST C2MS & Mission Networking





# ST C2MS Wearable Components

## Human-Machine Interfaces

- Audio
- Microphones
- Display
- Control

## Personal Area Network (PAN)

- Hub
- Cabling
- Adapters
- Services & Boundaries

## Mission Appliances

- UAS Integration
- Sensors
- Designators
- Optics

## Radios

- Voice
- Data / Video
- Data Link
- Antennas & cabling

## Compute, Controls, & Display

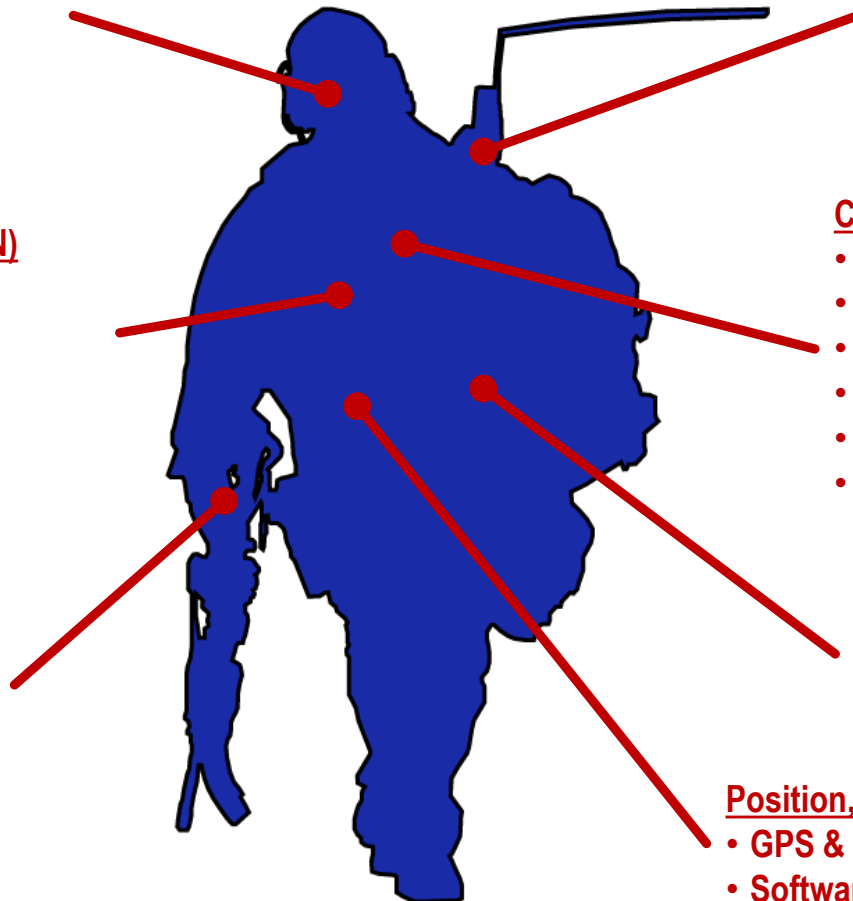
- Tablet
- Software
- Interface & Casing
- Keypads
- Storage
- Applications

## Power Management

- PAN interface
- Batteries

## Position, Navigation, & Timing (PNT)

- GPS & PNT Devices
- Software, Moving Map





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# Special Tactics

## Mission Support Organization

### Issues

- Reliance on multiple PEOs, PMOs, and SPOs through a variety of C2 authorities

*Inconsistent relationships*

*Product synchronization is ad hoc at best*

*None are accountable for end state, overall ST capability*

*Little to no AF, SOF, AFRL de-confliction and collaboration*

**Serial coordination across agencies causes lengthy delivery schedules**







# UNCLASSIFIED ATAK Core Capabilities



Maps/Imagery



GeoFence



Route Analysis



Overlays



Emergency Alerts



Mission Package



Map Markers



9Line, CFF



JumpMaster



Chat



Fires Tools



Tactical Radio Controls



Video



MEDEVAC



Drawing tools



Coordinate/  
Address



Route  
Planning



Elevation Analysis



Range & Bearing



Navigation



Layout Manager



# UNCLASSIFIED ATAK Plugin Efforts



Ground  
Guidance



Survey Kit  
(ATSK)



Geo Cam



Air Overlays



sUAS C2 & ISR



Rad Nuke



Data Sync



Sniper Toolkit



Air Warden



WAMI



Weather



RECCE log



Mortars Fires



Silver Fang UAS  
SIGINT



Skate UAS



Digital Nautical  
Charts (DNC)



Avalanche  
Prediction



Combat Swim



DACO



SSE



Terrain Streaming



HUD controller



SLANT  
(SITREP Report)

Legend:  SOMPE Plugins



# Organization Complexity Example

## ST Mission Networking (BAO Kit - ATK - FCD-W)



PEO-C4  
(USSOCOM)



SOMPO PMO



Nett Warrior PMO  
(USA)



BA SPO  
(USAF)



PEO SOF/ISR  
(USAF)



TACLAN PMO



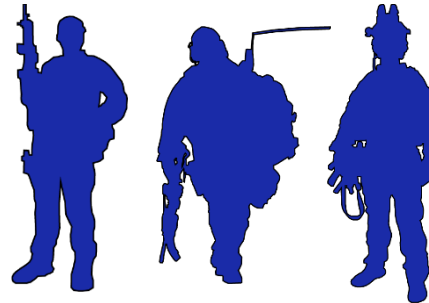
SOF PR/RW SPO  
(USAF)



PEO-SOF Warrior  
(USSOCOM)



SOFTACS PMO



AFRL  
(USAF)



SOF/PR RECAP SPOs  
(USAF)



PMSP PMO



PEO-FW  
(USSOCOM)



Multiple CAD



CERDEC  
(USA)



Multiple Aircraft SPOs  
(USAF)



PEO Mobility  
(USAF)



# BAO / ATAK Primary Agencies



PEO SOF/ISR  
(USAF)



BA SPO  
(USAF)



AFRL  
(USAF)



PEO-C4  
(USSOCOM)



TACLAN PMO



SOFTACS PMO



SOMPO PMO



PEO-SOF Warrior  
(USSOCOM)



PMSP PMO

- ST personal mission networking kit is delivered and affected by multiple PEOs and SPO/PMOs
- Often synchronization issues
- No integrator
- Variety of different decision makers



Nett Warrior PMO  
(USA)



CERDEC  
(USA)





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# Special Tactics

## Mission Support Organization

### Actions

- Mandate clear roles and lead PEO with faster timelines
- Mandate integration and interoperability
- Relieve some PEOs/SPOs of requirement and POM funding
- Develop AFSOC Integration Cell to synchronize actions and deliver interoperable configurations



# ST Mission Materials (ATAK)



## Issues



- Systems delivered well beyond need date

*Not responsive to operations*

*Systems outdated quickly due to 20-26 month upgrade cycle*

- Without classified/unclassified options (HHL-16 / Training / HADR)
- In un-useable configurations (No BT/Cell/Wi-Fi)
- Not interoperability with other SOF / AF / joint systems
- With inappropriate / unusable cybersecurity settings
- Without sufficient support & support architectures

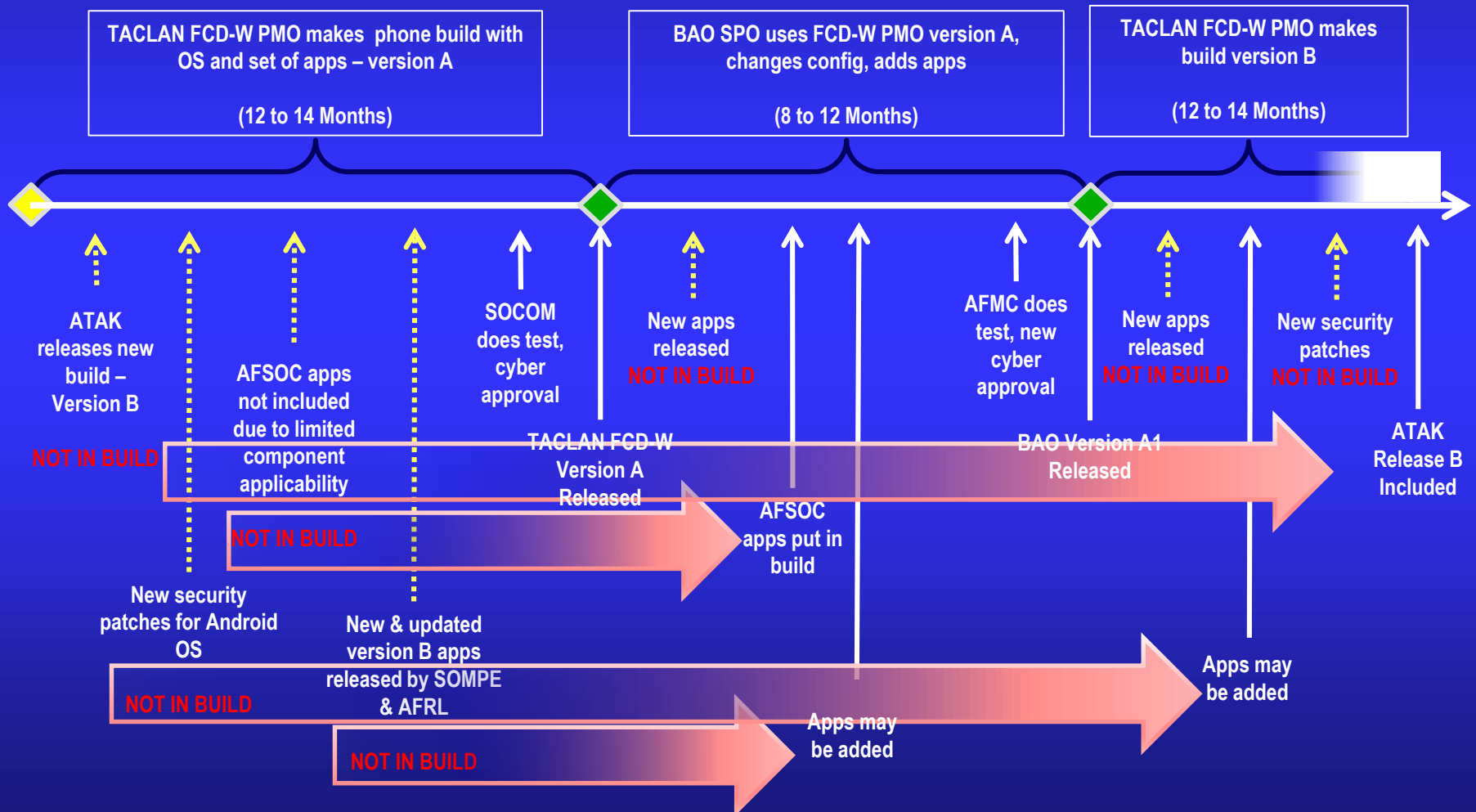
*Without sufficient content management*

*With non-automated manpower intensive architectures*



# Today's Software Flow – ATAК / BAO

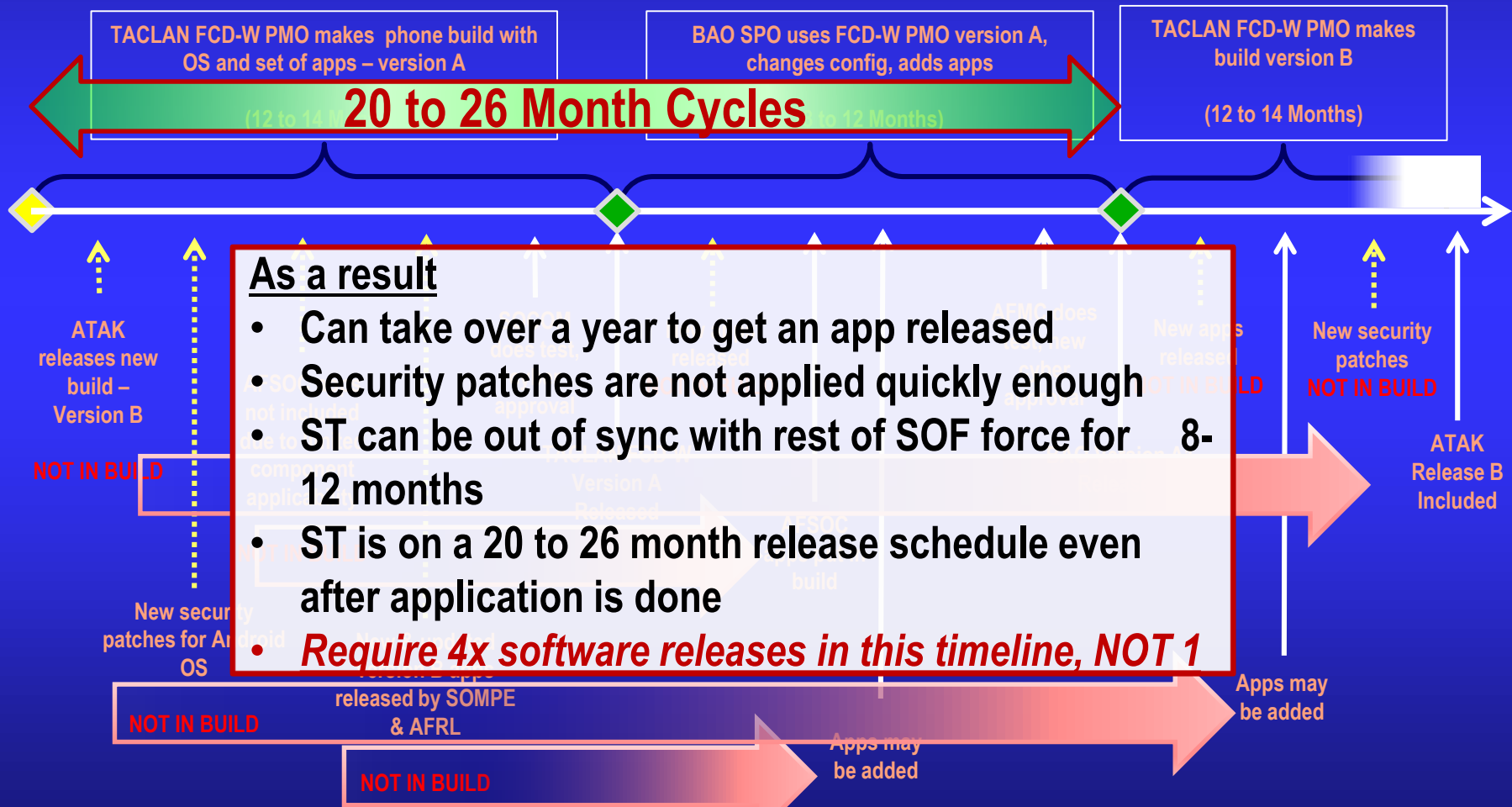
Starts over with new version and neither effort covers an UNCLASSIFIED capability





# Today's Software Flow – ATAК / BAO (2)

Starts over with new version and neither effort covers UNCLASSIFIED capability

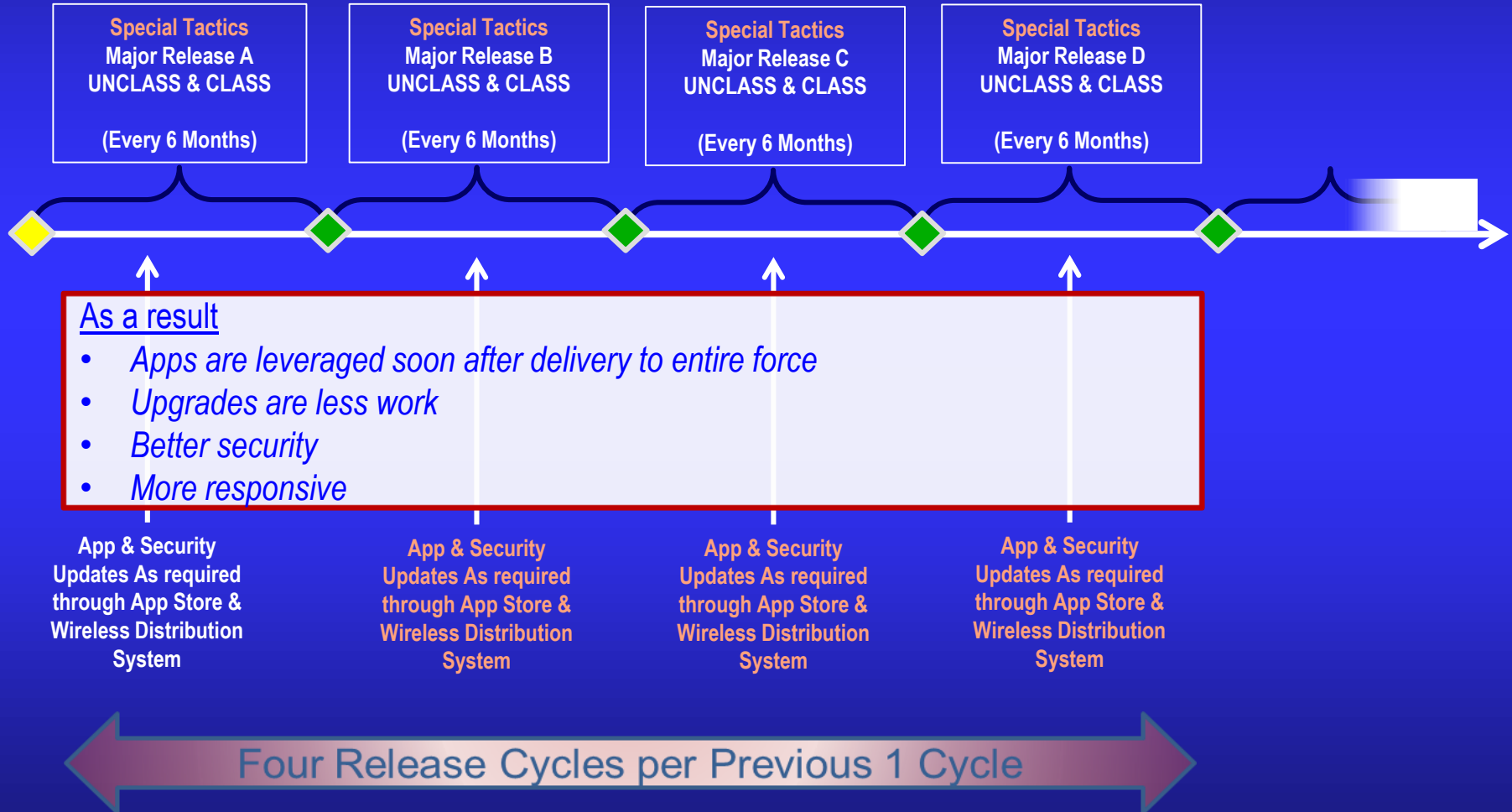






# Required Software Flow

Leverages app store, mobile device management, and wireless distribution





# Personnel

## Issues

- Existing support contracts do not fill all needs; over-scoped and undermanned
- Lack of technical experts to ensure components are properly integrated, interoperable, cyber secure, and supportable
- Lack of government technical expertise to ensure proper contract oversight (form-factor, network, software)
- Not enough manpower for manual support architecture; manpower doesn't exist to properly support equipment
- Lack of architects to ensure system of systems work



# Special Tactics

## C2MS Imbedded Specialties and Services



- Computer Systems / Mobile Device Engineering
- Software Engineering
- Network Engineering
- RF Engineering
- Cybersecurity Engineering
- Information Systems Security Manager (ISSM)
- Device Specialists
- Courseware Developers
- Trainers
- Systems Sustainment Technicians
- Configuration Management
- Reachback Support



# C2MS Strategy

- Establishing C2MS at Hurlburt Field, FL with satellite presence at other Special Tactics (garrison / deployed) sites
- Fill service and expertise gaps with new/modified contracts
  - Include PMO/SPO engineers/program liaisons*
  - Include all support services*
  - Clarify, update, and leverage existing contracts*
- Establish ST Integration Facility
- Establish ST mission networking architecture



# C2MS Roadmap



Mar 2018	Apr 2018	May 2018
Contracts on Task		
C2MS Stand-Up		
	C2MS Start Unclass & Class (ATAK / HHL-16) Integration Builds	
	C2MS Device Management & Data Distribution	
	C2MS One-Off ST Capabilities Builds	

**\*All dependent on funding availability and contract timelines**



# Projected Costs to Revolutionize The Special Tactics Enterprise

These costs cover expertise / services required and core support architecture to address issues.

*\*Does not account for existing contracts that could reduce costs by \$2M.*

Category	Costs	Comment
Full Time Services	\$5.05M	Engineers, cybersecurity, training developers, etc...
Liaison & Reps	\$1.20M	From ATAK, BAO, SOMPE, AFRL, TACLAN
Materials	\$3.20M	Wireless, Device Management
Total	\$9.45M	



# Questions?

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